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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,136	03/26/2001	Kenichi Nakanishi	450106-02621	5076

7590 12/02/2002

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EXAMINER

ENCARNACION, YAMIR

ART UNIT	PAPER NUMBER
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2186

DATE MAILED: 12/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,136

Applicant(s)

NAKANISHI ET AL.

Examiner

Yamir Encarnacion

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Drawings

1. The drawings are objected to because sheet 15 of the drawings supplied is redundant. It appears to the examiner that the labels on sheet 15 are not needed in view of page 15, lines 7-24 of the written description. Also, the sheet is not a "Figure" and is not mentioned in the section titled "Brief Description of Drawings." It appears to the examiner that sheet 15 should not be part of the figures. A proposed drawing correction, or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

In page 14, line 10 replace "Fig. 13" with --Figs. 13A and 13B--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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5. The limitation “the parallel writing” on line 27 appears for the first time and appears to lack antecedent basis. It appears to the examiner that applicant meant lines 25-26 read “and writing data in parallel into the designated cluster address.” The examiner has interpreted claim 6 for purposes of this Office Action as if it had read “and writing data in parallel into the designated cluster address” on lines 25-26. Either clarification as to what applicant intended or amendment of the claim is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Estakhri*

(USPN: 6,081,878) in view of *Smith* (USPN: 5,860,082).

Claimed	<i>Estakhri</i>
1. A data processing system in which a non volatile memory apparatus	See figure 5.
having a plurality of storages	See figure 5, non volatile memory units 508.

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in which one cluster is constructed by a plurality of sectors and	In <i>Estakhri</i> , each block (which reads on the claimed “cluster”) includes 32 sectors in the preferred embodiment. See column 7, lines 45-48.
one segment is constructed by a plurality of clusters	Not clearly shown.
is detachable to/from a data processing apparatus,	<i>Estakhri</i> suggests that memory card 502 could be used as a PCMCIA card and a digital film card for a digital camera. See column 6, lines 1-4.
wherein said data processing apparatus has address designating means for designating an address of the cluster in which data is recorded,	Column 7, lines 55-57 states that “[a]n actual LBA received from host 504 (a host-provided LBA) identifies a sector of information.”
said memory apparatus has recording means for recording the data into the address designated by said address designating means, and	The reference meets the limitation of the claim.

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the data of said plurality of clusters in said one segment is distributed and arranged into said plurality of storages.	See figure 7, block 727 which comprises a first sub-block 730 of a first flash memory chip 670 and a second sub-block 731 of a flash memory chip 672. See also, column 8, lines 8-11.
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Estakhri does not clearly show that “one segment is constructed by a plurality of clusters.”

However, *Smith* discloses of a method for operating a flash memory such as the one described by *Estakhri* wherein the flash memory comprises at least one partition of data storage locations. See *Smith*, column 2, lines 2-5. Also, see figure 2 of *Smith*. While not explicitly disclosed, the plurality of blocks in *Estakhri* is arranged into at least one partition like the one shown in figure 2 of *Smith*. The said partition reads on the claimed “segment.” In the alternative, it would have been obvious to partition the non-volatile memory described by *Estakhri* as suggested by *Smith* for the purpose of permitting large portions of data to be written and read from the non-volatile memory at one time as was suggested by *Smith* on column 1, lines 63-65.

As to claims 2-3, see the comments for claim 1 above.

As to claim 4, see figure 8A, the LBA-PBA map 800. See also, column 10, lines 6-9.

As to claim 5, note offset bits 812 shown in figure 8B.

As to claim 6, and the limitation that the writing be “in parallel” the examiner notes that in *Estakhri* data is written two multiple nonvolatile memory devices simultaneously (that is “in

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parallel"). See column 21, lines 56-58. Also, the examiner notes that in *Estakhri* "after [] sectors [] have been written [] sectors that were not re-accessed during the write operation are moved" (which reads on the claimed "distributing and arranging the data of said plurality of clusters in one segment into said plurality of storages.") See column 17, lines 23-27.

8. Claim 6 is alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over the *Estakhri/Smith* combination in view of *Brown* (USPN: 6,038,636).

As to the limitation of "distributing and arranging the data of said plurality of clusters in one segment into said plurality of storages" the examiner notes that those of ordinary skill in the art would have found it obvious to "defragment" the nonvolatile device described by the *Estakhri/Smith* combination for the purpose of providing a sufficient amount of contiguous free space to satisfy a storage request. Accordingly, it would have been obvious to "defragment" the non-volatile device described by the *Estakhri/Smith* combination because the *Estakhri/Smith/Brown* combination would have allowed for providing a sufficient amount of contiguous free space to satisfy a storage request. Defragmentation would have met the claimed "distributing and arranging."

Conclusion

Any inquiry concerning this or an earlier communication from the Examiner should be directed to Yamir Encarnacion by phone at (703) 308-5466.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim, can be reached on (703) 305-3821.

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Any formal response to this action intended for entry should be mailed to Commissioner of Patents and Trademarks, Washington, D.C. 20231 or faxed to (703) 746-7239 and labeled "FORMAL" or "OFFICIAL." Any informal or draft communication should be faxed to (703) 746-7240 and labeled "INFORMAL" or "UNOFFICIAL" or "DRAFT" or "PROPOSED" and followed by a phone call to the Examiner at the above number. Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

YEE

Yamir Encarnacion

Patent Examiner

November 20, 2002


MATTHEW KIM
SUPERVISORY PATENT EXAMINER
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